

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

March 4, 2004

TO: Internal File

THRU: Wayne Western, Environmental Scientist, Engineer, Lead

FROM: Jerriann Ernstsens, Ph.D., Environmental Scientist, Biology.

RE: Chapter 2 and 3 Revisions, Canyon Fuel, Soldier Canyon Mine, C/007/0018, Task ID #1784

SUMMARY:

On September 5, 2003, the Division received an amendment (#1665) for the removal of references to the refuse pile and preparation plant at the Soldier Canyon Mine. The amendment also included updated reclamation procedures. The Technical Analysis went out deficient.

For the first round (#1784; December 2003), the Permittee had removed most of the references, but still discussed the transfer/disposal of 20,000 cubic yards of excess material from the mine area to the refuse pile. The Division and Permittee discussed alternative scenarios for the 20,000 cubic yards of material. The Permittee selected one of the scenarios and decided to resubmit a new version of #1784 (January 2004) rather than to submit a new amendment.

The Permittee chose to spread the material over the mine site during reclamation instead of disposing it at the refuse pile. This change allowed the Permittee to remove references to the refuse pile and preparation plant. The Permittee, however, had to make minor changes to Chapter 5 concerning bonding and final contouring of the site.

The Division determined that application of the 20,000 cubic yards will result in 10 acres of the project to receive 15" of material instead of 5" and 4 acres to receive 22" of material instead of 12". The Division agreed that this amount of material would not significantly alter the contour of the site. The Permittee agreed to have a certified engineer stamp engineering maps indicating that the 20,000 cubic yards will not significantly alter the contour of the site.

TECHNICAL MEMO

The Division notes that the Permittee “self-approved” added or deleted text for the version submitted in January 2004 (comparing to the version submitted in December 2003 and the MRP). The self-approved text included editing corrections, out dated material, or unnecessary information.

TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

GENERAL

Regulatory Reference: 30 CFR 783.12; R645-301-411, -301-521, -301-721.

Analysis:

The Permittee did not submit the entire section of Environmental Resource Information for soils or biology. Submitting new material to this section was not necessary because the Permittee only removed references to the refuse pile and preparation plant as well as added updated reclamation procedures. The Division reviewed only the few pages submitted and did not find deficiencies in text additions or deletions for soils or biology.

Findings:

The Division considers information in the application adequate to meet the minimum Permit Application Format and Contents section of the General Contents regulations.

OPERATION PLAN

FISH AND WILDLIFE INFORMATION

Regulatory Reference: 30 CFR Sec. 784.21, 817.97; R645-301-322, -301-333, -301-342, -301-358.

Analysis:

The Permittee did not submit sections of Operation Plan related to Fish and Wildlife. The Division reminds the Permittee that they must follow raptor protection rules during reclamation. There are nests within the disturbed area, therefore, and the Permittee must comply with exclusionary dates (approximately January 1 through August 31).

Findings:

No review of Operation Plan sections related to Fish and Wildlife.

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Analysis:

The Permittee removed text related to the refuse pile and preparation plant. The Permittee also included a few minor changes to the Topsoil and Subsoil section of the Operation plan that included grammatical corrections, out dated material, and unessential information (compare #1784 December 2003 to January 2004). These changes did not change the remaining requirements or content for Soils.

Findings:

The Division considers that the changes to the Topsoil and Subsoil section of the Operation Plan did not alter the remaining content of this section.

VEGETATION

Regulatory Reference: R645-301-330, -301-331, -301-332.

Analysis:

The Permittee removed text related to the refuse pile and preparation plant. The Permittee also included a few minor changes to the Vegetation section of the Operation plan that included final seed mix changes, grammatical corrections, out dated material, and unessential information (compare #1784 December 2003 to January 2004). Except for the seed mix changes, these changes did not change the remaining requirements or content for Vegetation.

TECHNICAL MEMO

The seed mix changes included reducing the number of mixes to the following three mixes. Plants listed in bold represent species added to the original mixes (MRP).

DECIDUOUS STREAM BANK FINAL SEED MIX

Great basin wildrye	<i>Leymus cinereus</i>
Kentucky bluegrass	<i>Poa pratensis</i>
Mountain brome	<i>Bromus marginatus</i>
Slender wheatgrass	<i>Elymus trachycaulus</i>
Streambank wheatgrass	<i>Elymus lanceolatus</i>
Western wheatgrass	<i>Pascopyrum smithii</i>
Sweet anise	<i>Osmorhiza occidentalis</i>
White yarrow	<i>Achillea millefolium</i>
Mountain lupine	<i>Lupinus alpestris</i>
Antelope bitterbrush	<i>Purshia tridentata</i>
Woods rose	<i>Rosa woodsii</i>
Mountain snowberry	<i>Symphoricarpos oreophilus</i>

Species removed from the original mix are alfalfa, clover, and flax. These species were either not the best species for the site or not endemic to the site (Vol. 2 Append. 3).

Reclamation of the riparian areas not only includes seeding, but also planting bare-root stock. The bare-root species will include:

DECIDUOUS STREAM BANK BARE-ROOT STOCK: 50 stems of each spp. per acre

Narrowleaf cottonwood	<i>Populus angustifolia</i>
Willow spp.	<i>Salix</i> spp. Species selected must be endemic to the area e.g. <i>S. exigua</i> (coyote willow)
Red osier dogwood	<i>Cornus stolonifera</i>

Plants removed from the original stock selection are **cuttings** of willow and cottonwood. The Permittee mentioned that success has been very low with cuttings because the soils dry up before root-inducing temperatures increase. Reclamation will include planting of fifty bare-root stems of each species, therefore totaling 150 stems per acre (Vicky Miller, personal communications 3/2/04).

TECHNICAL MEMO

SEWAGE LAGOON AREA FINAL SEED MIX

Great basin wildrye	Leymus cinereus
Indian ricegrass	Achnatherum hymenoides
Thickspike wheatgrass	Elymus lanceolatus
Western wheatgrass	Pascopyrum smithii
Blue grama	Bouteloua gracilis
Northern sweetvetch	Hedysarum boreale
Annual sunflower	Helianthus annuus
Scarlet globemallow	Sphaeralcea coccinea
Utah juniper	Juniperus osteosperma
Wyoming big sagebrush	Artemisia tridentata wyomingensis
Black sagebrush	Artemisia nova
Shadscale	Atriplex confertifolia

Species removed from the original mix are slender wheatgrass, alfalfa, clover, flax, birchleaf mountain mahogany, and Saskatoon serviceberry. These species were either not the best species for the site or not endemic to the site (Vol. 2 Append. 3).

CENTRAL MINE FACILITIES AREA FINAL SEED MIX

Great basin wildrye	Leymus cinereus
Indian ricegrass	Achnatherum hymenoides
Slender wheatgrass	Elymus trachycaulus
Western wheatgrass	Pascopyrum smithii
Bluebunch wheatgrass	Pseudoroegneria spicata ssp. spicata
Northern sweetvetch	Hedysarum boreale
Prairie sage	Artemisia ludoviciana
Blueleaf aster	Aster glaucodes
Rocky Mountain penstemon	Penstemon strictus
Mountain big sagebrush	Artemisia tridentata vaseyana
Utah serviceberry	Amelanchier utahensis
Winterfat	Ceratoides lanata
Antelope bitterbrush	Purshia tridentata

Species removed from the original mix are thickspike wheatgrass, alfalfa, clover, flax, and Saskatoon serviceberry. These species were either not the best species for the site or not endemic to the site (Vol. 2 Append. 3).

TECHNICAL MEMO

Findings:

The Division considers that the changes to the Vegetation section of the Operation Plan did not alter the remaining content of this section.

RECLAMATION PLAN

PROTECTION OF FISH, WILDLIFE, AND RELATED ENVIRONMENTAL VALUES

Regulatory Reference: 30 CFR Sec. 817.97; R645-301-333, -301-342, -301-358.

Analysis:

The Permittee included a few minor changes to the Protection section of the Reclamation plan that included grammatical corrections, out dated material, and unessential information (compare #1784 December 2003 to January 2004). These changes did not change the remaining requirements or content for Protection.

Findings:

The Division considers that the changes to the Protection section of the Reclamation Plan did not alter the remaining content of this section.

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

Analysis:

The Permittee removed text related to the refuse pile and preparation plant. This change did not change the remaining requirements or content for Soils.

Findings:

The Division considers that the changes to the Topsoil and Subsoil section of the Reclamation Plan did not alter the remaining content of this section.

REVEGETATION

Regulatory Reference: 30 CFR Sec. 785.18, 817.111, 817.113, 817.114, 817.116; R645-301-244, -301-353, -301-354, -301-355, -301-356, -302-280, -302-281, -302-282, -302-283, -302-284.

Analysis:

Revegetation: General Requirements

The Permittee removed text related to the refuse pile and preparation plant as well as added updated reclamation procedures. The Permittee also made a few minor changes to the Vegetation section of the Reclamation plan that included grammatical corrections, out dated material, and unessential information (compare #1784 December 2003 to January 2004). These minor changes did not change the remaining requirements or content for Vegetation.

The Permittee removed commitments about grazing on reclaimed areas during the ten-year liability period, requirements of Utah and federal requirements for poisonous and noxious plants and introduced species, and details on standards for success. The content removed does not release the Permittee's obligation to follow related regulations.

The Permittee included updated reclamation procedures. The Permittee plans to grade to final contour, rip to relieve compaction, apply growth medium, apply one ton per acre of hay (certified noxious weed free) while gouging the surface, hydroseed, and hydromulch. The seeding procedure will include hydroseeding with a small amount of mulch followed by hydromulching with one ton per acre of organic-hydro mulch that contains a tackifier.

For site preparation, the Permittee will spread 20,000 cubic yards of excess material from the mine area to the refuse pile instead of disposing it at the refuse pile as previously planned. The Division determined that application of the 20,000 cubic yards will result in 10 acres of the project to receive 15" of material instead of 5" and 4 acres to receive 22" of material instead of 12". The Division agreed that this amount of material would not significantly alter the contour of the site. The Permittee agreed to have a certified engineer stamp engineering maps indicating that the 20,000 cubic yards will not significantly alter the contour of the site.

Findings:

The Division considers updates to the reclamation plan adequate to meet the regulations of Vegetation section of the Reclamation Plan. Furthermore, that the minor edits to the Vegetation section of the Reclamation Plan did not alter the remaining content of this section.

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RECOMMENDATIONS:

The Division should accept the amendment.

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